

Children's Mercy Kansas City

SHARE @ Children's Mercy

Research Month 2024

Research at Children's Mercy Month

5-2024

Patient Portal Messaging and Physician Well-Being: A Scoping Review

Sofia Laux

Makayla Ayres

Thomas Ayres

Let us know how access to this publication benefits you

Follow this and additional works at: https://scholarlyexchange.childrensmercy.org/research_month2024

Patient Portal Messaging and Physician Well-Being: A Scoping Review

Sofia Laux¹; Makayla Ayres¹; Thomas Ayres, PhD²

¹UMKC School of Medicine; ²Children's Mercy Kansas City

Introduction

- With the advent of the EMR, physicians have had increasingly more tasks to incorporate into their workflow
- Patient portal messaging has become a large component of EMR related tasks
- The effects of EMR workload on physician well-being have been well studied. However, literature is not as robust regarding the specific effect of patient portal messaging on physician well-being
- Our project aims to review the current literature regarding patient portal messaging and its impact on physician well-being and burnout

Methods

- We followed the PRISMA guidelines for conducting scoping reviews to structure our search through previous literature
- Articles published prior to 2021 were not included as the landscape of patient-physician communication has changed in the post pandemic era

Results

Figure 1: Scoping Review Flow Chart

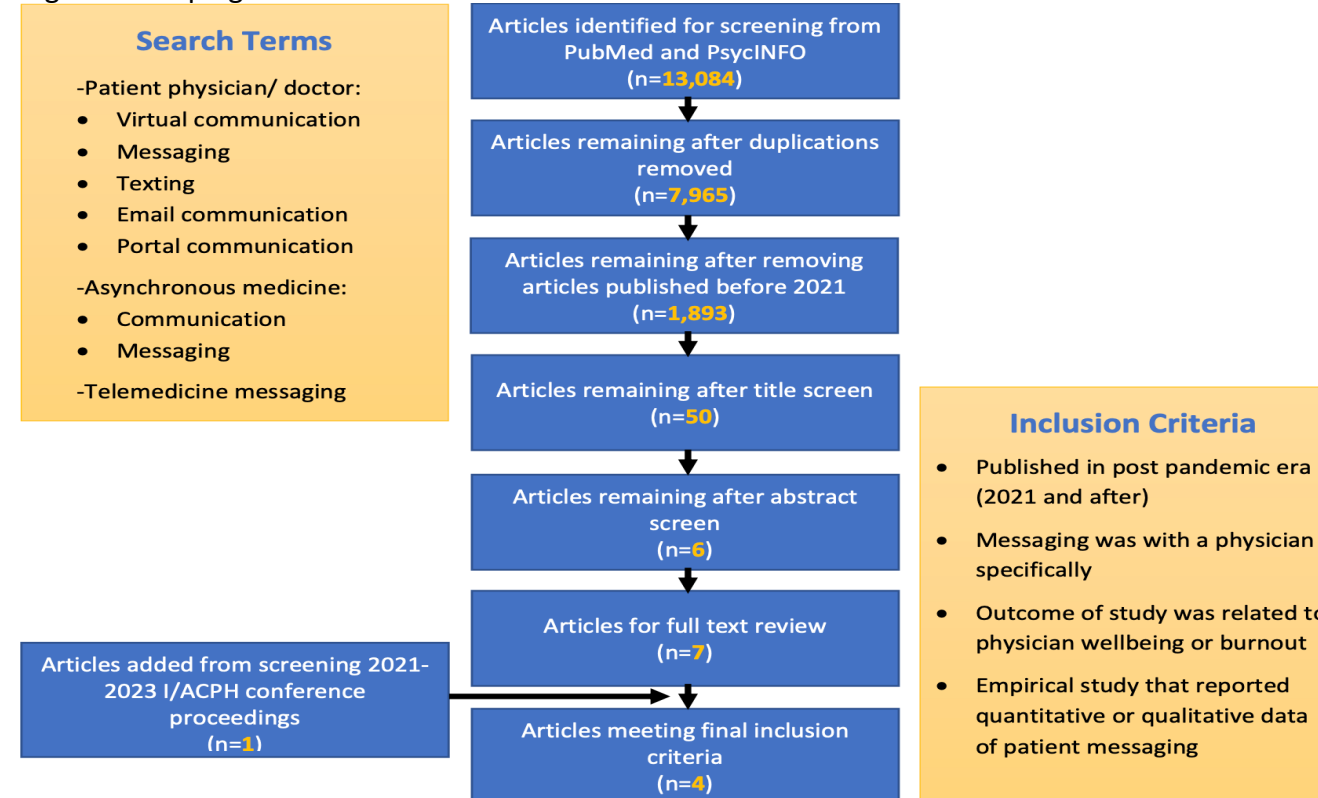


Figure 2: Scoping Review Results Summary

<i>Physician Stress During Electronic Health Record Inbox Work: In Situ Measurement With Wearable Sensors</i> ¹	<i>Association of Electronic Health Record Inbasket Message Characteristics With Physician Burnout</i> ²	<i>Message applications in the doctor-patient relationship as a stressor</i> ³	<i>Association of physician burnout with perceived EHR work stress and potentially actionable factors</i> ⁴
Akbar-2021	Baxter-2022	Gonzales Viega-2022	Tai-Seale-2023
Population • PCPs at Kaiser Permanente Medical Group	Population • Physicians of multiple specialties at UCSD	Population • Ob-Gyns at ABC foundation SOM (Brazil)	Population • Physicians of multiple specialties at UCSD
Methods • Physicians wore heart rate sensors for 7 days. Perceived stress was measured through experience sampling and a one-time survey. Data from EHR was quantified	Methods • Physicians completed wellbeing and burnout surveys, epic message data extracted and analyzed with natural language processing	Methods • Physicians completed surveys related to stress and burnout and were divided into groups based off weekly hours spent on WhatsApp communicating with patients	Methods • Physicians completed burnout survey and questions related to EHR experience
Pertinent Results • Patient messaging was the largest contributor of EHR work • Factors like inbox work duration and proportion of inbox work done outside of work hours were independently associated with daily stress duration	Pertinent Results • Physicians who report burnout receive large volumes of messages on average, however it was not statistically significant • No significant difference between message sentiment and burnout	Pertinent Results • Higher levels of perceived stress in physicians who spent more hours communicating with patients via messaging	Pertinent Results • High level of EHR stress and more prescription reauthorization messages associated with higher odds of burnout • Physicians responding to messages directly vs delegating screening messages to support staff did not have a significant effect on burnout

Conclusion

- Modern literature focusing on patient portal messaging and physician wellbeing conducted in the post-pandemic era is sparse.
- We can categorize current research into four areas of investigation: Volume of messages, message sentiment, timing of response, appropriateness of message recipient
- Volume of messages has received the most attention and consistently shows negative relationship with wellbeing.
- Message sentiment, timing of response, and appropriateness of message recipient all need more investigation

Possible future research directions in each area:

- Message sentiment: identifying typology of messages (e.g., harassment, illegitimate requests)
- Timing of response: examining timing of answering portal messages during and after the work day (e.g., morning, end of day, during breaks, dedicated time at home, end of night)
- Appropriateness of message recipient: What messages should be answered by physicians vs others



*References available upon request